December 4, 1992

US EPA RECORDS CENTER REGION 5

Mr. Ken Theison On-Scene Coordinator U.S. EPA, Region V 77 W. Jackson Boulevard HSE-5J Chicago, Illinois 60604

RE: SELMER SITE, ELKHART, INDIANA--REVISIONS TO THE WORK PLAN FOR A FIELD INVESTIGATION (DATED OCTOBER 1992)

Dear Ken:

Attached are revised page numbers 3, 5, 8, 13, 15 and 21 for replacement of the respective pages in the referenced work plan. These revisions are based on U.S. EPA and U.S. Department of Justice comments as we discussed on the telephone.

As you indicated, your receipt of these revisions will allow you to accept the work plan, thereby allowing the U.S. Department of Justice to enter into the consent agreement with the Parties involved with this site. We look forward to a rapid approval and execution of the consent agreement to enable us to begin implementation of the field investigation.

If you have additional questions, please do not hesitate to contact me at (616) 942-9600.

Sincerely,

WW ENGINEERING & SCIENCE

Scott I. Denus

Environmental Services

Scott T. Dennis, C.P.G.

Director, Environmental Investigations

cc: Frank Bentkover--U.S. Department of Justice (1 copy)
Linda Bullen--McDermott, Will & Emery (3 copies)
Director, Waste Management Division, U.S. EPA (1 copy)
Ann Pizzorusso--North American Philips Corporation (7 copies)
Ken Theison--U.S. EPA (2 copies)
Michael W. Steinberg--Morgan, Lewis & Bockius (1 copy)
Jim Woodsmall--Warrick, Weaver & Boyn (1 copy)

building and associated storage buildings are located in the northern half of the property (see Figure 3). An office building with a parking lot is located at the south end of the facility. Asphalt pavement for parking also exists along the western portion of the facility.

Surface water runoff drains to topographic depressions located east of the manufacturing building and west of the office building, which are wooded and periodically contain standing water.

The facility, currently operating under the name "Vincent Bach Company", was constructed in 1965. The facility was operated from 1965 to 1970 by C.G. Conn, Ltd. The property was transferred in June 1990 to The Selmer Company. On December 29, 1988, The Selmer Company was sold to Integrated Resources Inc., the current owner.

Several additions have been added to the manufacturing facility since its construction in 1965. In 1971, the building was expanded approximately 59,000 square feet and 12,000 square feet to the north and east of the original building, respectively. In 1972, a southern extension of approximately 15,000 square feet was added to the original facility.

The facility has been used exclusively for the manufacture of brass musical instruments. Solvents are used during the manufacture of band instruments to degrease and clean brass components prior to finishing with lacquer and to clean the parts in assembly operations. Trichloroethylene (TCE) is a solvent used during the manufacturing process.

Degreasing operations have occurred chiefly in vapor phase degreasers (VPDs) which were connected to solvent distillation units by 1967 to reclaim the used solvent for reuse. The solvent distillation units on the VPDs generated sludge, commonly referred to as "still bottoms", which must be removed periodically. The still bottoms consisted chiefly of animal fats, buffing compounds, and some percentage by weight of solvents (TCE).

1.4 PREVIOUS STUDIES OF EASTERN ELKHART AREA

Laboratory analyses of ground water samples obtained throughout the eastern Elkhart area have documented the occurrence of several VOCs, including TCE, TCA, and dichloromethane (methylene chloride). TCE, which is commonly used as a degreaser by many industries, is the principal VOC detected in the area.

VOCS were first detected in ground water by the U.S. EPA in 1976. Four shallow residential wells located between the St. Joseph River and the industrial park were

2.0 PURPOSE AND SCOPE OF WORK

The primary purpose of the proposed investigation is to characterize the soil and ground water conditions at the Site to determine the presence or absence of an area(s) of contamination that may have resulted from the alleged disposal of TCE. The objectives of the investigation are as follows:

- to better define the soil stratigraphy of the Site;
- to evaluate the occurrence and relative magnitude of VOCs that may be present in soil vapor in the unsaturated zone;
- to quantify the VOCs in the soil and ground water by laboratory analyses;
- to delineate the impact of VOCs, if any, to soil at the Site;
- to confirm the presence or absence of VOC's in ground water at the Site; and
- to confirm the presence or absence of possible source areas at the Site.

In order to meet these objectives, the investigation is proposed to be conducted in two phases. The initial phase will involve the implementation of a soil gas survey to identify potential source areas at the Site. The scope of work for the Phase I will include PETREX[©] passive sampling techniques offered by the Northeast Research Institute (NERI) of Farmington, Connecticut.

The second phase will involve the implementation of a drilling and soil/ground water sampling program. The Phase II work scope will include the (1) drilling of a minimum of five soil borings, (2) collection of soil and ground water samples during drilling for chemical testing, (3) laboratory analysis of selected soil samples based on field headspace analyses and all ground water samples for VOCs, and (4) interpretation of the analytical results.

If the results of the Phase II work indicate that soil and/or ground water do not exceed appropriate state and/or federal standards, a final report will be issued. If the results of the Phase II work indicate that applicable remedial standards for soil or ground water have been exceeded, additional work will be proposed to delineate the area of concern.

benchmarks will be used to establish ground surface elevations for all soil gas sampler locations. All elevations will be recorded to the nearest one-tenth of a foot.

3.2.2 Installation of Samplers

A total of 71 Petrex© soil gas samplers, provided by NERI, will be placed in uniform arrays (see Figures 3 and 4). A grid with a spacing of 50 feet will surveyed within an approximate 400-foot by 250-foot area east of the manufacturing facility. Within the 50-foot grid, a more closely spaced 25-foot grid pattern will be surveyed in the area immediately east of the manufacturing plant. The sample locations will be labeled with the prefix "SG" as indicated in Figure 4. Sample locations may be deleted or altered depending on the presence of surface water within the lowlands east of the manufacturing facility. If the proposed sample location is covered by surface water such that the water prevents access, or would not allow for useful soil gas data, the location will be moved to the perimeter of the standing water. If this adjustment in location results in locating the sampler within 25 feet of another proposed sample location, the sample location will be deleted.

The passive collectors will be activated in the field by removing the cap and seal and placing them in an inverted position into cored holes at a depth of 17 inches. The boreholes will be drilled with a hammer drill using a 1.5-inch by 18-inch bit to accommodate the 1-inch outer diameter (OD) sampler. The boreholes will be backfilled with native soil cuttings, and flagged for easy location. At each sample location, field notes will be recorded regarding sample location, type of sampler installed (regular or duplicate), date and time of installation, soil profile, type of backfill, moisture conditions, type of flagging, and staining of soil.

For the samplers located within areas of asphalt pavement or concrete, the boreholes may be backfilled with crushed aluminum foil to one inch below grade. The remaining one inch will be backfilled with quick-setting cement. Additional attention will be given to flagging the stations within the areas of dense vegetation to ensure sample retrieval. The samples may, if deemed necessary, be encapsulated in a Ziplock bag prior to insulation; the Ziplock bag is impermeable to water, yet permeable to VOC's.

3.2.3 REMOVAL OF SAMPLERS

All soil gas samplers will be installed within a 24 to 72 hour time period and will be retrieved after a maximum 28-day residence period. During the residence period, the samplers will equilibrate with the soil vapors of the undisturbed medium. Upon retrieval, the gas samplers will be shipped to NERI's Lakewood, Colorado laboratory for MS

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The USEIA will determine which of these options is appropriate.

4.0 PHASE II - DRILLING AND SAMPLING PROGRAM

The soil and ground water conditions at the Site will be evaluated during a Phase II investigation. The second phase would include the implementation of a drilling and sampling program. The purpose of the drilling and sampling program is to assess the potential impact of VOCs to the soil and ground water at the Site and to determine the potential source(s) of the impacts. The objectives of the Phase II investigation are to:

- characterize the soil stratigraphy;
- quantify VOCs which may be present in the soil and ground water; and
- evaluate the distribution of the VOCs.

The scope of the proposed Phase II work will include:

- drilling of soil borings;
- collection of soil samples during drilling;
- installation of temporary wells in the soil borings;
- collection of ground water samples during drilling;
- preparation of well/boring log sheets;
- laboratory analysis of soil and ground water samples for U.S. EPA Method 8021;
- preparation of maps and cross-sections;
- preparation of isochemical contour maps, if appropriate;
- identification of the absence or presence of VOC's in ground water at the Site; and
- identification of the absence or presence of potential source area(s).

The scope of work for the Phase II investigation including laboratory testing will be implemented by WWES' personnel in Grand Rapids, Michigan. Soil and ground water samples will be analyzed by WWES' Environmental Laboratory in Grand Rapids, Michigan.

4.1 FIELD METHODS

The following is a summary of the field methodology to be implemented during the Phase II investigation. For a more detailed description of Environmental Laboratory Division protocol, refer to WWES's SOP's in Appendix C. The field work will be implemented in accordance to the Health & Safety Plan presented in Appendix B.

4.1.1 SOIL BORINGS

If no anomalies indicative of potential source areas are observed during Phase I, five soil borings will be drilled using 4.25-inch inner diameter (ID) hollow-stem augers and an all-

4.1.3 FIELD SCREENING

Field screening of soil samples will be performed using a photoionization detector (PID) using a 11.7 eV lamp. The PID measures the total amount of volatile organics in the headspace of a sample in parts per million (ppm) with of precision of 0.1 ppm. The method of measuring the headspace of a soil sample is described in detail in Appendix C.

The field screening results will be recorded on well/boring log sheets along with a lithologic description of the sample and the number of blow counts required to advance the split-spoon sampler.

4.1.4 GROUND WATER SAMPLING

Ground water samples will be collected from temporary wells installed during drilling of each of the five soil borings. Temporary wells will be constructed consisting of 2-inch ID galvanized steel riser pipe and a 5-foot long stainless steel well screen. The well materials will be placed within the bore hole once the augers have been advanced to a depth 5 feet below the water table. The augers will then be retracted to expose the well screen to the natural formation.

The temporary wells will be developed using a pump or Teflon bailer until the discharge water is observed to be relatively free of suspended fines and until a minimum of three casing volumes of water are removed. Immediately following well development, ground water samples will be collected for laboratory testing using steam-cleaned Teflon bailer and polypropylene rope. One duplicate ground water sample and equipment rinse blank will be collected from one of the five wells.

The ground water samples will be labeled with the prefix "TW-" and the soil boring number followed in parenthesis by the well screen depth interval. The notation "Duplicate" will be added to the sample identification for the duplicate ground water sample. The "bailer rinse blank" label will include the temporary monitoring well number which was sampled after decontamination of the Teflon bailer and collection of the rinse water. Table 1 presents the required containers, preservation techniques, and holding times for the ground water (aqueous) samples collected for laboratory analysis.

- procedures for sample preparation;
- instrument start up and performance check;
- initial and continuing calibration check requirements;
- specific methods for each sample matrix type; and
- required analysis procedures.

Calibration of laboratory equipment will be based on approved written procedures (see Appendix E). Records of calibration, repairs, or replacement will be filed and maintained by the designated laboratory analyst. These records will be filed at the location where the work is performed and will be subject to QA audit.

4.4 REPORT

Upon completion of the drilling and sampling program, a report will be prepared by WWES summarizing the results of the soil gas survey and drilling and sampling programs, if no further investigatory work is warranted. The data will be presented in tabular and graphic format. Isochemical contour maps and cross sections will be prepared, if appropriate. The lateral and vertical extent of VOCs in the soil, if present, will be delineated. Identification of potential source areas will be made, if possible. Based on the results of the Phase I and II investigations, recommendations will be made regarding any appropriate remedial action.

A technical memorandum will be prepared in lieu of the report if soil or ground water is determined to be impacted and additional characterization of the contaminated ground water or contaminated soil is needed. The technical memorandum will include a proposed scope of work for the third phase of field investigation.

The report or technical memorandum will be submitted to the U.S. EPA for their review and comment.